Dharwad

ज्ञानेन विकासः

M.Tech in Computer Science & Engineering

(Specialization:Cybersecurity)

Empowering innovators to defend the digital world.

2 years | Live Interactive Online Sessions

About IIIT Dharwad

The Indian Institute of Information Technology Dharwad (IIIT Dharwad), recognized as an Institute of National Importance, is at the forefront of India's technology education and research landscape. Located in the educational and innovation hub of Hubballi-Dharwad, the institute is redefining how technology drives learning, research, and societal impact. With a commitment to academic excellence, research-driven education, and strong industry collaboration, IIIT Dharwad nurtures a new generation of engineers and researchers equipped to lead the digital revolution. Its modern infrastructure, dynamic learning environment, and vibrant campus culture foster creativity, curiosity, and collaboration among students, empowering them to innovate and excel in a rapidly evolving technological world.

Guided by its vision to be a globally renowned academy of information technology for societal development, IIIT Dharwad integrates ethical values, interdisciplinary learning, and global perspectives across all programs. The institute's mission is to produce globally competent technology professionals who combine deep technical expertise with ethical, societal, and environmental awareness, while addressing local and global challenges through innovative, interdisciplinary solutions.

IIIT Dharwad is recognized for its strong research ecosystem, with ongoing projects in Artificial Intelligence, Cybersecurity, and the Internet of Things (IoT). The institute boasts dedicated research centers, cutting-edge laboratories, and collaborations with leading global technology firms, providing students with opportunities to engage in applied research and innovation. An upcoming Tech Park and Startup Incubation Centre will further strengthen entrepreneurship and real-world problem-solving opportunities for students and researchers.

Beyond academics, IIIT Dharwad offers a vibrant and holistic campus life. Students actively participate in clubs, societies, and annual technical and cultural fests, which foster leadership, teamwork, and creativity. Modern facilities, including hostels, digital libraries, laboratories, and sports complexes, support personal growth and enrich the overall learning experience. Through this integrated ecosystem of excellence, research, and innovation, IIIT Dharwad empowers students to transform ideas into impact and prepares them to become leaders shaping the future of technology.

About The Program

The M.Tech in Computer Science & Engineering (Specialization in Cybersecurity) is a two-year online postgraduate program designed for students and professionals aiming to develop advanced expertise in digital security, ethical hacking, and cyber defense systems. The program blends academic rigor, research-oriented learning, and real-world applications to equip learners with the knowledge and tools to protect digital infrastructures from evolving threats. Graduates emerge ready to lead cybersecurity initiatives across industries, ensuring data integrity, privacy, and resilience in an increasingly connected world.

Who is this program is ideal for

- Working professionals and graduates seeking to specialize in Cybersecurity, Network Security, or Digital Forensics.
- IT professionals, system administrators, and analysts aiming to transition into cyber defense or security operations roles.
- Individuals aspiring to pursue R&D or doctoral programs in Cybersecurity and related domains.
- Professionals interested in ethical hacking, cyber law, or information assurance careers.

Key Program Details

Duration
2 Years

Mode
Online

Course Fees
₹ 3,54,000
Easy EMI Options are Available

Campus Immersion
A seven-day in-person session at IIIT Dharwad

Eligibility

1. Educational Qualification : B.E. / B.Tech / M.Sc / MCA degree.

2. Employment Status : Candidate should be a working professional, currently or previously employed.

3. Academic Performance:
General / OBC category - Minimum CGPA/CPI: 6.5 on a 10-point scale, or Minimum aggregate percentage: 60%.

SC / ST / PwD category - Minimum CGPA/CPI: 6.0 on a 10-point scale, or Minimum aggregate percentage: 55%.

Why Choose IIIT Dharwad?

Prestigious M.Tech Degree
Earn an M.Tech in Computer Science & Engineering (Cybersecurity) from an Institute of National Importance.

Cutting-Edge Curriculum
Gain hands-on knowledge in areas like Digital Forensics, Ethical Hacking, Network Security, Cryptography, and AI for Cybersecurity.

Campus Immersion
The program includes a 7-day on-campus immersion at IIIT Dharwad, offering hands-on learning, networking opportunities, and direct interaction with faculty and industry experts.

Distinguished Faculty
Learn from top academicians and cybersecurity professionals who combine research depth with real-world defense experience.

Capstone Project
Conclude your learning journey with a research-driven project addressing live cybersecurity challenges.

Networking Opportunities
Connect and collaborate with a diverse cohort of professionals, researchers, and industry leaders, fostering peer learning and building lasting professional networks.

Robust Industry Ties
Strong collaborations with top tech companies providing hands-on exposure and future-ready skills.

Flexible Online Learning
Learn at your own pace with live interactive sessions and campus immersions, designed for working professionals.

IIIT Dharwad Alumni Status
Join IIIT Dharwad's exclusive alumni network of tech professionals and cybersecurity specialists.

Programme Module

Sl. No	Course Type	Course Name	Credit
		SEM 1	
1	DisCore	**Applied Mathematics for Computer Science**	3
		Unit 1: Linear Algebra Unit 2: Optimization Unit 3: Probability and Stochastic Process	
2	DisCore	**Advanced Data Structures and Algorithms**	3
		Unit 1: Growth Functions Unit 2: Trees Unit 3: Graph Algorithms Unit 4: Algorithm Design Strategies Unit 5: Complexity Classes	
3	DisCore	**Programming Paradigms Lab**	2
		Unit 1: Procedural Programming Unit 2: Object-Oriented Programming (OOP) Unit 3: Functional Programming Unit 4: Concurrent & Parallel Execution Unit 5: Declarative and Logic Programming Unit 6: Scripting & Automation	
4	Elective	**Introduction to AI/ML**	1
		Unit 1: Introduction to AI Unit 2: Problem Solving using Search Unit 3: Knowledge Representation Unit 4: Introduction to Machine Learning Unit 5: Supervised Learning Unit 6: Unsupervised Learning Unit 7: Applications of AI & ML	

5	Elective	**Introduction to Cybersecurity**	1
		Unit 1: Introduction to Cybersecurity Unit 2: Identity & Access Management Unit 3: Standards & Regulations	
6	Elective	**Introduction to Cloud Computing**	1
		Unit 1: Introduction to Cloud Computing Unit 2: Cloud Service Models and Deployment Models	
7	Master's Core	**Introduction to Research**	2
		Unit 1: Introduction Unit 2: Literature Review Unit 3: Research Exploration Unit 4: Patenting and Publications Unit 5: Presentation, Report and Thesis Writing Unit 6: Conclusions and Future Scope Unit 7: Principles & Ethics in Research	
8	Project	**Project-I**	3
		Total	15
SEM 2			
9	DisCore	Advanced Computing Lab	2
10	Master's Core	Literature Review and Seminar	2
11	Elective	Electives (1/2/3/4 credits)	5
12	Project	Project-II	6
		Total	15
SEM 3			
13	Project	Project-III	9
14	Elective	Electives (1/2/3/4 credits)	6
		Total	15
SEM 4			
15	Project	Project-IV	12
16	Elective	Electives (1/2/3 credits)	3
		Total	15
		Total Program Credits	60

Cybersecurity Specialization

Sl. No	Course Name
1	Computer System Security
2	Security in Cloud Computing
3	AI for Cybersecurity
4	Biometric Security and Forensics
5	Forensic Data Recovery
6	Deep Learning
7	Dev Sec Ops

Alumni Privileges

Students will receive an official Institute Email ID and ID card, and will be eligible to participate in institute events and activities. Upon completion, they become part of the institute's alumni network.

Assessment & Evaluation

Students will be evaluated through a combination of **quizzes, assignments, case studies, and end-term examinations.** These diverse assessment methods ensure continuous learning and a well-rounded understanding of the subject.

Tools you'll Master

TensorFlow · Keras · PyTorch · WIRESHARK

Azure · git · GitLab · Jenkins · kubernetes

aws · scikit learn · jupyterlab

*Tool exposure varies by specialization; students may not work with all tools listed.

Programme Structure

7 Days
On-Campus Immersion

5 Program Modules
(including a seven day on-campus immersions)

Each module incorporates real-world projects, enabling participants to apply concepts in Cybersecurity, Digital Forensics, and more to address emerging digital threats.

Pedagogy & Delivery

The program follows a blended learning approach, combining multiple instructional methods to enhance learning outcomes:

Interactive Live Sessions

Engage with faculty and peers through discussions, Q&A, and case study analysis.

Self-Paced Learning

Access recorded lectures, readings, and practice exercises to reinforce concepts.

Experiential Learning

Apply knowledge through projects, simulations, and hands-on assignments.

Collaborative Activities

Participate in group exercises, peer learning, and forums to foster teamwork and practical understanding.

Attendance Policy

Participants are required to maintain a minimum of 75% attendance to successfully complete the program, structured as follows:

60% Synchronous Attendance: Participation in live lectures, discussions, and interactive sessions.

15% Asynchronous Engagement: Completion of recorded content and self-paced learning activities.

Program Objectives

Build Advanced Cybersecurity Expertise: Develop in-depth understanding of computer system security, cryptography, network protection, and ethical hacking techniques.

Enable Threat Detection & Response: Cultivate skills to identify vulnerabilities, assess risks, and design robust defense mechanisms.

Research & Innovation in Cyber Defense: Equip learners to undertake academic and industrial research in emerging cybersecurity domains.

Hands-On Technical Proficiency: Strengthen practical knowledge through labs, simulations, and forensic investigations.

Ethical & Legal Awareness: Promote responsible cybersecurity practices aligned with ethical standards and cyber laws.

Career Readiness: Enable professionals to lead roles in cyber defense, digital forensics, data protection, and network administration across global industries.

Learning Outcomes

- **Design Secure Systems:** Implement advanced techniques to safeguard networks, databases, and cloud environments.
- **Perform Threat Analysis:** Identify, analyze, and mitigate cyber threats using cutting-edge tools and frameworks.
- **Conduct Forensic Investigations:** Investigate digital evidence, perform forensic recovery, and support cybercrime analysis.
- **Integrate AI in Cybersecurity:** Leverage AI tools to automate threat detection and enhance proactive defense strategies.
- **Ensure Ethical Compliance:** Apply global best practices and legal frameworks to ensure data privacy and ethical operations.
- **Collaborate Across Domains:** Work in cross-functional teams to develop comprehensive cybersecurity solutions for modern enterprises.
- **Lead Innovation:** Demonstrate technical and strategic impact through applied research and real-world projects in cybersecurity.

Fee Structure

Application Fee: ₹ 2,000
Program Fee (Inclusive of Application Fee) : ₹ 3,56,000

Semester	I	II	III	IV	Total
Fee	88500	88500	88500	88500	**354000**

*Easy EMI Options are Available

*The application fees is strictly non-refundable and non-transferable.

Refund Policy

A refund is applicable after a deduction of 10000 before commencement of the batch, provided the course material has not been accessed or downloaded.

No refund will be provided on or after the batch commencement date

Program Certificate

Admission Process

1. Fill the application form
And pay the application fee

2. Appear for an interview round

3. If selected,
you will receive the offer letter

4. Pay the Programme fees and
confirm your admission

Program Director

Dr. Sunil Kumar P V
Assistant Professor

Indian Institute of Information Technology, Dharwad

Dr. Sunil Kumar P V is an accomplished academician and researcher in the field of Computer Science and Engineering, with a specialization in Machine Learning for Bioinformatics. He completed his PhD from NIT Calicut and has over 15 years of experience in teaching, research, and industry collaboration. Currently serving as an Assistant Professor at Indian Institute of Information Technology, Dharwad, Dr. Sunil has previously held faculty positions at CMR Institute of Technology, MES College of Engineering, and MEA Engineering College. He has published extensively in peer-reviewed journals and international conferences and has delivered numerous invited lectures and workshops on advanced computing, AI, and bioinformatics. With strong expertise in AI, ML, data analytics, and computational biology, he brings a rich blend of research excellence, teaching acumen, and industry engagement to lead and inspire the next generation of technology professionals.

Program Faculty

Dr. Abdul Wahid
Assistant Professor

Computer Science & Engineering
Ph.D. (IIT Dhanbad)

Dr. Animesh Roy
Assistant Professor

Computer Science & Engineering
Ph.D. (IIEST)

Dr. Dibyajyoti Guha
Assistant Professor

Computer Science & Engineering
Ph.D. (IIT Bhubaneswar)

Dr. Girish G N
Assistant Professor

Computer Science & Engineering
Ph.D. (NITK)

Dr. Krishnendu Ghosh
Assistant Professor

Computer Science & Engineering
Ph.D. (IIT Kharagpur)

Dr. Malay Kumar
Assistant Professor

Computer Science & Engineering
Ph.D. (NIT Raipur)

Dr. Milind Chabbi
Professor of Practice

Computer Science & Engineering
Rice Univeristy

Dr. Pavan Kumar C
Assistant Professor

Computer Science & Engineering
Ph.D. (VIT Vellore)

Dr. Prabhu Prasad B M
Assistant Professor

Computer Science & Engineering
Ph.D. (NITK Surathkal)

Dr. Pramod Yelmewad
Assistant Professor

Computer Science & Engineering
Ph.D. (NITK Surathkal)

Dr. Shrinivas Kulkarni
Professor of Practice

Computer Science & Engineering
PhD - University of Edinburgh

Dr. Sunil C K
Assistant Professor

Computer Science & Engineering
Ph.D. (NITK Surathkal)

Dr. Sunil Kumar P V
Assistant Professor

Computer Science & Engineering
Ph.D. (NIT, Calicut)

Dr. Suvadip Hazra
Assistant Professor

Computer Science & Engineering
Ph.D. (NIT Durgapur)

Dr. Vivekraj V K
Assistant Professor

Computer Science & Engineering
Ph.D. (IIT Roorkee)

Prof. Rajesh Vasa
Adjunct Professor

Computer Science & Engineering
PhD - Swinburne Univ. of Technology

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